In the abstract:

Please amend the Abstract on Page 29 as follows:

ABSTRACT OF THE DISCLOSURE

A device for calculating numerical solutions for partial differential equations in successive intervals using adaptive meshes, comprises: a neural network part for producing predictions of gradients at a following interval based on gradients available from previous intervals, and a mesh adaptation part, associated with ~~said~~ the neural network part, configured for adapting a mesh over a domain of a respective partial differential equation using ~~said~~ the predictions, such that ~~said~~ the mesh adaptively refines itself about emerging regions of complexity as ~~said~~ the partial differential equation progresses over ~~said~~ the successive intervals. The neural network part succeeds in its predictions since its use herein is equivalent to using time series function fitting techniques.